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The Importance of the Formation of the Earth Information System Using Digital Technologies in the Conditions of the Digital Economy

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Abstract: *This article provides information about the importance of forming a land information system using digital technologies in the context of the digital economy.*

Keywords: *digital technology, digital economy, information, land, resource, map, ArcGIS, drone, drone.*

Introduction.

In today's digital economy, it ensures efficient and rational use of land resources. The multi-purpose nature of land use requires a lot of requirements for various and qualitative information characterizing the natural, economic and legal status of land resource use. Land information is necessary to organize rational and efficient use of land, and it is the most important condition for managing the use of land resources [1-5].

The strategy of actions for the development of the country in 2017-2021 is of great practical importance in the system of ensuring social and economic stability of the Republic of Uzbekistan, deepening existing market relations, and modernization of the economy. The main goal is to further increase the effectiveness of the ongoing reforms, to raise the development of the state and society to a new level, to liberalize all spheres of life, and to implement the most priority directions for the modernization of all spheres in the republic [6-11].

One of the main principles of the legislation on land is to ensure that information about the status of land is complete and that it is allowed to use it freely.

Research object.

Land information of agricultural lands of Fergana region by administrative units.

Results and discussion.

Fergana region was established on January 15, 1938 in the south of Fergana valley. It borders Namangan and Andijan regions from the north, Kyrgyz Republic from the south and east, Tajikistan Republic from the west. The total land area is 700.5 thousand, the region consists of 4 cities, 15 districts, 10 towns and 164 rural communities, and the region has 3,564,600 inhabitants [12-15]

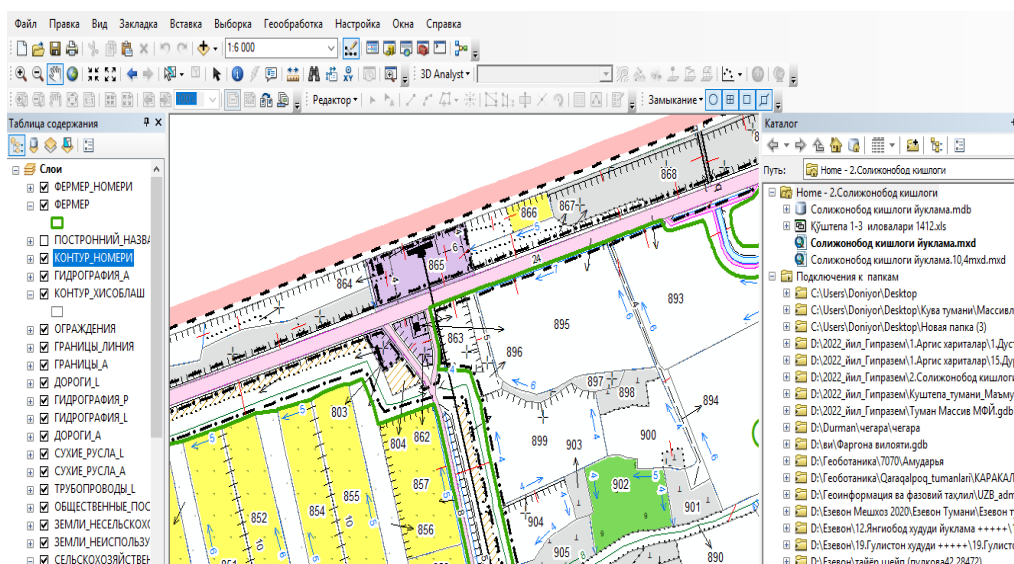
Today, the total land area of Fergana region is 700.5 thousand hectares, the largest part of which is 561.1 thousand hectares of agricultural land. The main branches of agriculture in the region are cotton growing, grain growing, cocoon growing, horticulture and cattle breeding. The arable land area is 247.5 thousand hectares, perennial tree plantations are 49.4 thousand hectares, hayfields and pastures are 234.8 thousand hectares, the total agricultural land is 320.5 thousand hectares, of which the irrigated land area is 300.8 thousand hectares. ha, homestead land is 72.8 thousand ha, forest lands are 14614 thousand ha, horticulture viticulture and vegetable growing associations land is 0.9 thousand ha, other land is 290.7 thousand ha [16-19].

The use of digital technologies is very effective in obtaining accurate and reliable land information about these land areas. In land use control, land is continuously monitored using drones[20-24].



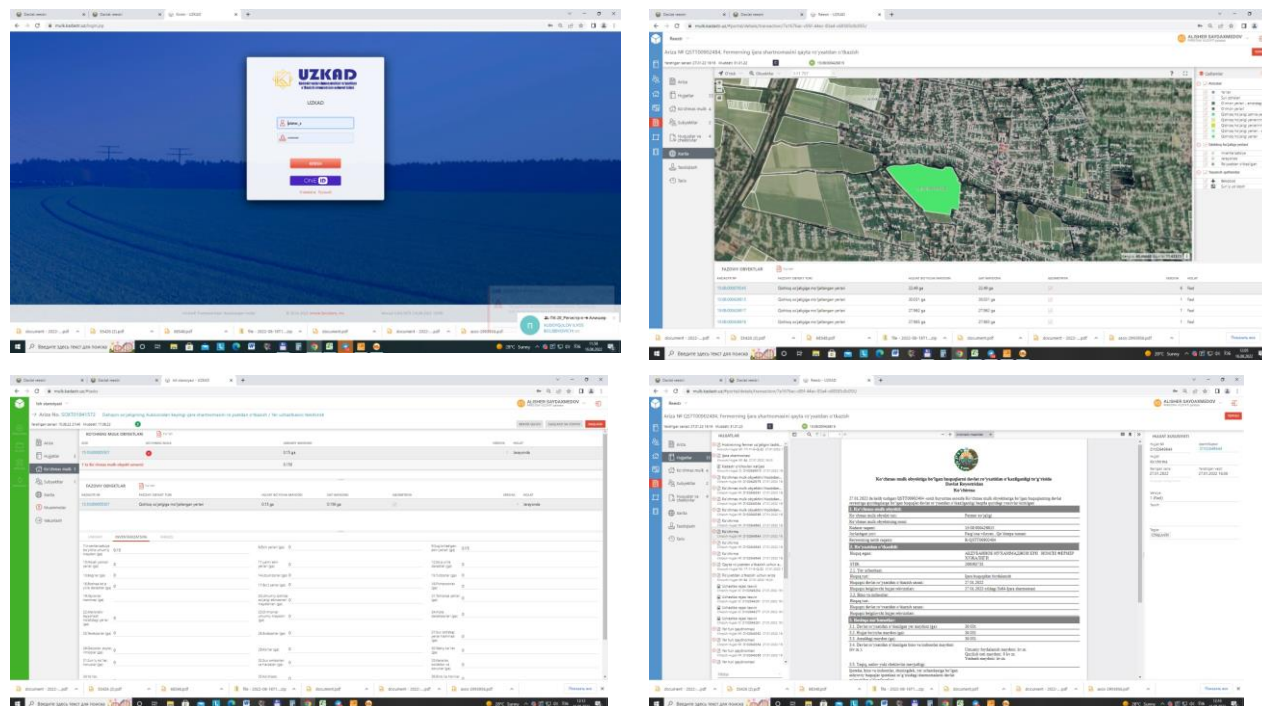
Picture 1. Land monitoring using drones

Based on the obtained monitoring results, digital electronic maps of land areas were created using the ArcGIS program, and the processes of forming a database were carried out[25-28].



Picture 2. Creating digital electronic maps in the ArcGIS program

Land information databases are formed based on the obtained results and maps, and cadastral number field, land user and other data are compiled for each land plot. The process of state registration of all information on the database created in the ArcGIS program is carried out[29-35].



Picture 3. State registration process

Conclusion.

From the above, it can be concluded that the use of digital technologies, control of the use of land resources, land information The system is distinguished by its efficiency in increasing the level of accuracy.

Suggestions and recommendations.

1. With the help of digital technologies, it is possible to increase the possibility of creating orthophotoplans and electronic digital maps of regions;
2. Clarification of territory boundaries, creation of electronic digital border maps will be achieved;
3. Formation of a database on users of land resources is achieved;
4. Enables constant monitoring of changes in land areas.

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